

**REMARKS**

Claims 1 and 3-5 are pending. It is noted that claim 5 had been added in the response filed April 6, 2005. Apparently, claim 5 was not entered. As such, it is added herein.

As a preliminary matter, it appears that the IDS filed on April 22, 2005 crossed with the mailing of the Office Action. The Examiner is requested to acknowledge consideration of the IDS with the next official communication.

Claims 1, 3 and 4 were rejected under 35 U.S.C. §10(a). Favorable reconsideration is respectfully requested.

**Eybergen** fails to provide any teaching or suggestion of the characteristic of the center disk to define the maximum valve lift of the valve position.

The plate 34 (in Figs. 1 to 3, reference numeral 34 is omitted) corresponding to the center disk of the present invention is for stiffening or backing, as described in 2<sup>nd</sup> paragraph of 3<sup>rd</sup> column of **Eybergen**. Presumably, the plate 34 is interposed between the undersurface of diaphragm 20 and the upper end of a spring 36, in fear that the diaphragm 20 is broken if the end of the spring 36 is directly brought into abutment with the diaphragm 20, since the diaphragm 20 is thin.

The aforementioned paragraph is the only paragraph that describes the plate 34, and even with reference to Figs. 1 to 3, it is impossible to non-ambiguously interpret that the plate 34 is brought into abutment with the inner wall of the lower shell 18 to thereby define the fully-open position of the valve section.

More specifically, there is a possibility that the fully-open position of the valve section is defined by abutment of the lower end of the tubular member 32 with the inner wall of an extension 38. Since there is some inconsistency between Figs. 1 and 3, it is impossible to make a clear and definite judgment in this point only from these figures. There is another possibility that the fully-open position of the valve section is defined not by the abutment described above, but by the balance between the force of the diaphragm 20 in the valve-opening direction shown in Fig. 3, and the forces of the spring 36 and the compression spring 52 in the valve-closing direction. In this case, the “abutment” is not necessarily to define the fully-open position of the valve section. When referring to Figs. 1 to 3, there is a higher possibility that the latter interpretation is true.

The Examiner argues that setting of the flow rate is considered a matter of design choice. As to the setting of the flow rate, as described in background of the invention of the present application, in almost all cases, “the maximum valve opening is unconditionally set to the set tonnage,” and it is not a matter of obvious choice to one of ordinary skill in the art to select the restricted flow rate such that the flow rate becomes equal to 1.0 to 1.4 times a flow rate of set tonnage.

For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited. If the

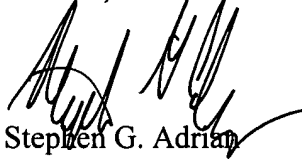
Amendment Under 37 C.F.R. § 1.111  
Serial No. 10/615,838  
Attorney Docket No. 030784

Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**

A handwritten signature in black ink, appearing to read 'Stephen G. Adrian', is written over the printed name.

Stephen G. Adrian  
Attorney for Applicants  
Registration No. 32,828  
Telephone: (202) 822-1100  
Facsimile: (202) 822-1111

SGA/asc  
Enclosures: Petition for Extension of Time